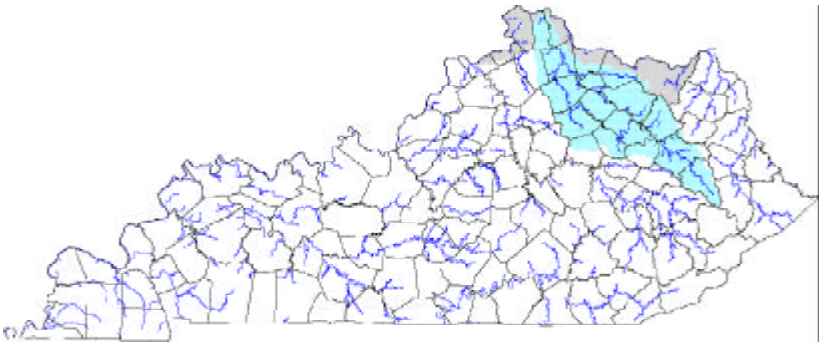
The Licking River Region in Kentucky:

Status and Trends

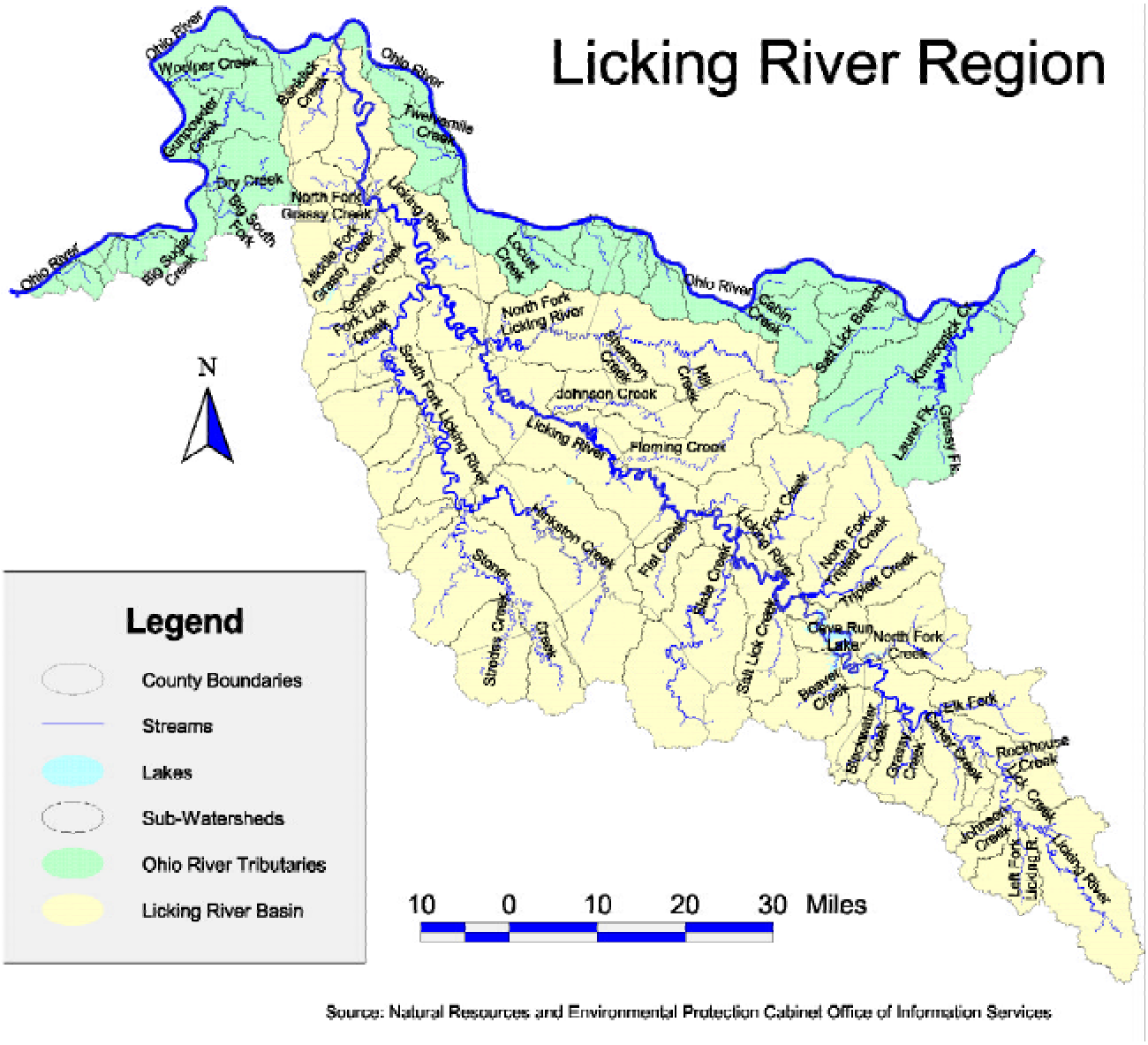


November 1998

We thank the Team members, the volunteers who have collected data and worked on watershed health issues, and Pamla Wood (coordinator), Barry Tonning (principal author), Maleva Chamberlain (layout), Rick Hill (cover), Lew Kornman (photos) and Kimberly Prough (maps).

"I have really enjoyed working with a basin team composed of such knowledgeable, practical and generous people. Their commitment and desire to involve many, many more people in the watershed effort has been an inspiration to me and others working on watershed issues in the Commonwealth."

Pamla Wood
Licking River Watershed
Team Coordinator



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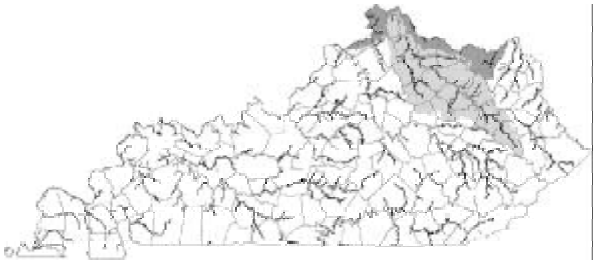

This report covers the entire drainage area – or *basin* – of the Licking River and other streams north and east of the basin along the Ohio River. In this report, the entire area is referred to as the Licking River region.

Are the streams in the Licking River region healthy?

That is the main question this report explores. In order to determine if the region's streams are contaminated, we have reviewed water sampling data, assessments of stream and river bank conditions, discharge permits for sewage treatment plants, and activities like farming, development, logging, and mining. We have found that what happens in the river basin – or *watershed* – directly impacts water quality and habitat conditions. Some tributaries in the Licking River region are contaminated with bacteria from sewage or livestock; silt from erosion, construction or logging; algae blooms fed by nutrients from fertilizers or manure; and some pollution from mining and industrial or urban sewage plants. Most of the streams in the region, however, seem to be free of excessive pollution. Maintaining good water quality in the unpolluted parts of the river and cleaning up contamination in other sections will require a closer look at what is happening in the watershed, how it impacts watershed health and what can be done to improve conditions. That is what this report is all about.

Basin or Watershed?
The *basin* of a river or stream is all the land that is drained by a lake, river or stream. Another word for basin is *watershed*, which comes from the observation that water is shed from an area of land and flows downhill into a body of water.

Where did this report come from?

This report was produced by the Licking River Region Team, a group of people representing various agencies and organizations in the watershed. The analysis and recommendations in the following pages are an important part of the Kentucky Watershed Initiative, a statewide effort to assess and improve watershed health in the Commonwealth. The report examines existing conditions in the Licking River watershed and other streams that drain directly into the Ohio River in northeastern Kentucky.

The information and maps that follow were collected from a variety of sources. Federal, state and local agencies provided much of the data, with supplemental information coming from *water monitoring* volunteers organized by the Licking River Watershed Watch, public universities and other organizations. This report will give readers a good, general background on the river basin. Hopefully, it will also spark some interest in exploring conditions within the smaller watersheds that feed into the Licking and Ohio rivers. Addressing issues in these tributary watersheds will require constructive, cooperative local action.

Water monitoring
Water monitoring to determine watershed health can involve many different activities. We can find out if our waters are fishable, swimmable, and drinkable by testing for various pollutants, checking oxygen levels, measuring water clarity and temperature, observing aquatic and terrestial life, and assessing habitat conditions both in the stream and along the banks.